



Eagle Environmental Consulting, LLC

December 24, 2024

Alfred Garraffa

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - State #36-614

Project Number - [none]

Attached are your analytical results for Noble - State #36-614 received by Origins Laboratory November 13, 2024. This project is associated with Origins project number E4K0379-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory
303.433.1322
projectmanager@originslab.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Eagle Environmental Consulting, LLC
8000 W 44th Ave
Wheat Ridge CO 80033

Alfred Garraffa
Project Number: [none]
Project: Noble - State #36-614

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-03@7-8'	E4K0379-01	Soil	November 13, 2024 10:10	11/13/2024 15:32
Background-04@7-8'	E4K0379-02	Soil	November 13, 2024 10:20	11/13/2024 15:32
Background-05@7-8'	E4K0379-03	Soil	November 13, 2024 10:30	11/13/2024 15:32
Background-06@7-8'	E4K0379-04	Soil	November 13, 2024 10:40	11/13/2024 15:32
Background-07@7-8'	E4K0379-05	Soil	November 13, 2024 10:50	11/13/2024 15:32
Background-08@7-8'	E4K0379-06	Soil	November 13, 2024 11:00	11/13/2024 15:32
Background-09@7-8'	E4K0379-07	Soil	November 13, 2024 11:15	11/13/2024 15:32

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Client: Eagle Environmental Consulting
 Address: 8000 W 44th Ave
 Telephone Number: 303-433-2919
 Email Address: algarraffa@eagle-environment.com

Project Manager: Alfred Garraffa
 Project Name: State #36-614
 Project Number: EWK0319
 Collected By: EG/SJL
 Invoice/Billing Info: Noble / Bill to Bm

Key: W=Water
 GW=Groundwater
 SW=Surface Water
 WW=Waste Water
 L=Liquid

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | U=Urine | FCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preservative	Analysis		Comments	
						EC (SRM/h)	Standard Ate Prep		
1	Background-07-04-11-10-10	10/10	1010	2	0114	X	X	X	EC (SRM/h)
2	Background-04-07-8		1020	1		X	X	X	Standard Ate Prep
3	Background-05-07-8		1030	1		X	X	X	
4	Background-06-07-8		1040	1		X	X	X	NOIs needed
5	Background-07-07-8		1050	1		X	X	X	
6	Background-08-07-8		1100	1		X	X	X	
7	Background-09-07-8		1115	1		X	X	X	
8									
9									
10									


Relinquished By: [Signature] Date: 11/13/24 Time: 6:52

Received By: [Signature] Date: 11/13/24 Time: 1:52

Turnaround Time: SAME DAY 24 Hr 48 Hr 72 Hr

Standard Yes No

1725 EK Place Denver, Co. 80221 | # 303.433.1322 | originslab.com | Temp Received - 3.3 Received On Ice? Yes No

Origins Laboratory


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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Origins Laboratory F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: E4K0379 Client: Eagle
 Client Project ID: State #36-614

Checklist Completed by: JN / Shipped Via: HD
 Date/time completed: 11/14/24 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____

Cooler Number/Temperature: 1 / 3.3 °C _____ °C _____ °C (Describe) _____ °C

Thermometer ID: 1007

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	//			
Is there ice present (document if blue ice is used)	//			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			//	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			//	
Were all samples received intact ⁽¹⁾ ?	//			
Was adequate sample volume provided ⁽¹⁾ ?	//			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		//		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	//			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	//			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	//			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	//			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			//	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)(pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			//	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JN

Date/Time Reviewed 11/18/24

Origins Laboratory



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Eagle Environmental Consulting, LLC
8000 W 44th Ave
Wheat Ridge CO 80033

Alfred Garraffa
Project Number: [none]
Project: Noble - State #36-614

Background-03@7-8'
11/13/2024 10:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-01 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.0994	mg/L	1	B4K1512	11/15/2024	11/18/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.19		0.499	meq/L	10	[CALC]	11/15/2024	11/18/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.32			pH Units	1	B4K1517	11/15/2024	11/16/2024	
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SAR by 20B Saturated Paste

SAR	0.305		0.0100	SAR	1	B4K1508	11/15/2024	11/18/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.240		0.00500	mmhos/cm	1	B4K1517	11/15/2024	11/16/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.90		0.281	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Barium	71.7		9.69	"	"	"	"	"	
Cadmium	ND		0.0969	"	"	"	"	"	

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-03@7-8'
11/13/2024 10:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-01 (Soil)

Table 915 metals by EPA 6020B

Copper	ND		9.69	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Lead	5.46		0.969	"	"	"	"	"	
Nickel	6.28		0.969	"	"	"	"	"	
Selenium	ND		0.252	"	"	"	"	"	
Silver	ND		0.0969	"	"	"	"	"	
Zinc	ND		35.8	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.128	0.319	mg/kg dry	1	2718543	12/13/2024	12/18/2024	U
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Origins Laboratory



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Eagle Environmental Consulting, LLC
8000 W 44th Ave
Wheat Ridge CO 80033

Alfred Garraffa
Project Number: [none]
Project: Noble - State #36-614

Background-04@7-8'
11/13/2024 10:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.121		0.101	mg/L	1	B4K1512	11/15/2024	11/18/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.09		0.499	meq/L	10	[CALC]	11/15/2024	11/18/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	0.484		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.28			pH Units	1	B4K1517	11/15/2024	11/16/2024	
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SAR by 20B Saturated Paste

SAR	0.506		0.0100	SAR	1	B4K1508	11/15/2024	11/18/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.249		0.00500	mmhos/cm	1	B4K1517	11/15/2024	11/16/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.37		0.279	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Barium	65.4		9.62	"	"	"	"	"	
Cadmium	ND		0.0962	"	"	"	"	"	
Copper	ND		9.62	"	"	"	"	"	

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-04@7-8'
11/13/2024 10:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-02 (Soil)

Table 915 metals by EPA 6020B

Lead	6.17		0.962	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Nickel	6.79		0.962	"	"	"	"	"	
Selenium	ND		0.250	"	"	"	"	"	
Silver	ND		0.0962	"	"	"	"	"	
Zinc	ND		35.6	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.158	0.395	mg/kg dry	1	2718543	12/13/2024	12/18/2024	U
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Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-05@7-8'
11/13/2024 10:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-03 (Soil)

Boron (DTPA Sorbitol)

Boron	0.151		0.101	mg/L	1	B4K1512	11/15/2024	11/18/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.64		0.499	meq/L	10	[CALC]	11/15/2024	11/18/2024	
Magnesium	1.31		0.823	"	"	"	"	"	
Sodium	0.950		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	7.98			pH Units	1	B4K1517	11/15/2024	11/16/2024	
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SAR by 20B Saturated Paste

SAR	0.783		0.0100	SAR	1	B4K1508	11/15/2024	11/18/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.436		0.00500	mmhos/cm	1	B4K1517	11/15/2024	11/16/2024	
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Table 915 metals by EPA 6020B

Arsenic	3.21		0.257	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Barium	79.2		8.85	"	"	"	"	"	
Cadmium	0.0947		0.0885	"	"	"	"	"	
Copper	ND		8.85	"	"	"	"	"	

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-05@7-8'
11/13/2024 10:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-03 (Soil)

Table 915 metals by EPA 6020B

Lead	6.70		0.885	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Nickel	7.60		0.885	"	"	"	"	"	
Selenium	ND		0.230	"	"	"	"	"	
Silver	ND		0.0885	"	"	"	"	"	
Zinc	ND		32.8	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.0953	0.238	mg/kg dry	1	2718543	12/13/2024	12/18/2024	U
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Origins Laboratory



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Eagle Environmental Consulting, LLC
8000 W 44th Ave
Wheat Ridge CO 80033

Alfred Garraffa
Project Number: [none]
Project: Noble - State #36-614

Background-06@7-8'
11/13/2024 10:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-04 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.101	mg/L	1	B4K1512	11/15/2024	11/18/2024
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Metals by Saturated Paste by EPA 6010

Calcium	1.27	0.499	meq/L	10	[CALC]	11/15/2024	11/18/2024
Magnesium	0.969	0.823	"	"	"	"	"
Sodium	0.616	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.23		pH Units	1	B4K1518	11/15/2024	11/16/2024
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SAR by 20B Saturated Paste

SAR	0.582	0.0100	SAR	1	B4K1509	11/15/2024	11/18/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.304	0.00500	mmhos/cm	1	B4K1518	11/15/2024	11/16/2024
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Table 915 metals by EPA 6020B

Arsenic	2.28	0.253	mg/kg	10	B4K1434	11/15/2024	11/16/2024
Barium	79.8	8.72	"	"	"	"	"
Cadmium	ND	0.0872	"	"	"	"	"
Copper	ND	8.72	"	"	"	"	"

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-06@7-8'
11/13/2024 10:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-04 (Soil)

Table 915 metals by EPA 6020B

Lead	5.86		0.872	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Nickel	6.11		0.872	"	"	"	"	"	
Selenium	ND		0.227	"	"	"	"	"	
Silver	ND		0.0872	"	"	"	"	"	
Zinc	ND		32.3	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.115	0.287	mg/kg dry	1	2718543	12/13/2024	12/18/2024	U
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Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-07@7-8'
11/13/2024 10:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-05 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0989	mg/L	1	B4K1513	11/15/2024	11/18/2024
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Metals by Saturated Paste by EPA 6010

Calcium	1.35	0.499	meq/L	10	[CALC]	11/15/2024	11/18/2024
Magnesium	0.839	0.823	"	"	"	"	"
Sodium	0.668	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.33		pH Units	1	B4K1518	11/15/2024	11/16/2024
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SAR by 20B Saturated Paste

SAR	0.638	0.0100	SAR	1	B4K1509	11/15/2024	11/18/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.318	0.00500	mmhos/cm	1	B4K1518	11/15/2024	11/16/2024
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Table 915 metals by EPA 6020B

Arsenic	1.76	0.248	mg/kg	10	B4K1434	11/15/2024	11/16/2024
Barium	88.7	8.55	"	"	"	"	"
Cadmium	ND	0.0855	"	"	"	"	"
Copper	ND	8.55	"	"	"	"	"

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-07@7-8'
11/13/2024 10:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-05 (Soil)

Table 915 metals by EPA 6020B

Lead	4.01		0.855	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Nickel	3.91		0.855	"	"	"	"	"	
Selenium	ND		0.222	"	"	"	"	"	
Silver	ND		0.0855	"	"	"	"	"	
Zinc	ND		31.6	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.0997	0.249	mg/kg dry	1	2718543	12/13/2024	12/18/2024	U
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Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-08@7-8'
11/13/2024 11:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-06 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.100	mg/L	1	B4K1513	11/15/2024	11/18/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.40		0.499	meq/L	10	[CALC]	11/15/2024	11/18/2024	
Magnesium	ND		0.823	"	"	"	"	"	"
Sodium	0.456		0.435	"	"	"	"	"	"

pH in Soil by 9045D

pH	8.17			pH Units	1	B4K1518	11/15/2024	11/16/2024	
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SAR by 20B Saturated Paste

SAR	0.445		0.0100	SAR	1	B4K1509	11/15/2024	11/18/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.280		0.00500	mmhos/cm	1	B4K1518	11/15/2024	11/16/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.00		0.271	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Barium	181		9.35	"	"	"	"	"	"
Cadmium	ND		0.0935	"	"	"	"	"	"

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-08@7-8'
11/13/2024 11:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-06 (Soil)

Table 915 metals by EPA 6020B

Copper	ND		9.35	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Lead	3.79		0.935	"	"	"	"	"	
Nickel	3.52		0.935	"	"	"	"	"	
Selenium	ND		0.243	"	"	"	"	"	
Silver	ND		0.0935	"	"	"	"	"	
Zinc	ND		34.6	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.113	0.281	mg/kg dry	1	2718543	12/13/2024	12/18/2024	U
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Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-09@7-8'
11/13/2024 11:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-07 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.0997	mg/L	1	B4K1513	11/15/2024	11/18/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.10		0.499	meq/L	10	[CALC]	11/15/2024	11/18/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.40			pH Units	1	B4K1518	11/15/2024	11/16/2024	
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SAR by 20B Saturated Paste

SAR	0.272		0.0100	SAR	1	B4K1509	11/15/2024	11/18/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.180		0.00500	mmhos/cm	1	B4K1518	11/15/2024	11/16/2024	
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Table 915 metals by EPA 6020B

Arsenic	1.14		0.259	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Barium	69.9		8.93	"	"	"	"	"	
Cadmium	ND		0.0893	"	"	"	"	"	

Origins Laboratory



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 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Background-09@7-8'
11/13/2024 11:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0379-07 (Soil)

Table 915 metals by EPA 6020B

Copper	ND		8.93	mg/kg	10	B4K1434	11/15/2024	11/16/2024	
Lead	4.38		0.893	"	"	"	"	"	
Nickel	3.66		0.893	"	"	"	"	"	
Selenium	ND		0.232	"	"	"	"	"	
Silver	ND		0.0893	"	"	"	"	"	
Zinc	ND		33.0	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.116	0.289	mg/kg dry	1	2718543	12/13/2024	12/18/2024	U
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Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1434 - EPA 3050B

Blank (B4K1434-BLK1)

Prepared: 11/14/2024 Analyzed: 11/16/2024

Arsenic	ND	0.290	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	0.100	"							
Copper	ND	10.0	"							
Lead	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	0.260	"							
Silver	ND	0.100	"							
Zinc	ND	37.0	"							

LCS (B4K1434-BS1)

Prepared: 11/14/2024 Analyzed: 11/16/2024

Arsenic	5.33	0.290	mg/kg	5.00		107	80-120			
Barium	530	10.0	"	500		106	80-120			
Cadmium	5.27	0.100	"	5.00		105	80-120			
Copper	53.7	10.0	"	50.0		107	80-120			
Lead	5.20	1.00	"	5.00		104	80-120			
Nickel	5.26	1.00	"	5.00		105	80-120			
Selenium	5.40	0.260	"	5.00		108	80-120			
Silver	5.76	0.100	"	5.00		115	80-120			
Zinc	51.8	37.0	"	50.0		104	80-120			

Matrix Spike (B4K1434-MS1)

Source: E4K0363-01

Prepared: 11/14/2024 Analyzed: 11/16/2024

Arsenic	6.86	0.287	mg/kg	4.94	1.17	115	75-125			
Barium	595	9.89	"	494	30.9	114	75-125			
Cadmium	5.33	0.0989	"	4.94	0.0346	107	75-125			
Copper	59.2	9.89	"	49.4	2.63	114	75-125			
Lead	8.15	0.989	"	4.94	3.01	104	75-125			

Origins Laboratory

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 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1434 - EPA 3050B

Matrix Spike (B4K1434-MS1)

Source: E4K0363-01

Prepared: 11/14/2024 Analyzed: 11/16/2024

Nickel	8.32	0.989	mg/kg	4.94	2.73	113	75-125			
Selenium	5.38	0.257	"	4.94	0.0635	108	75-125			
Silver	5.76	0.0989	"	4.94	ND	117	75-125			
Zinc	65.2	36.6	"	49.4	11.1	109	75-125			

Matrix Spike Dup (B4K1434-MSD1)

Source: E4K0363-01

Prepared: 11/14/2024 Analyzed: 11/16/2024

Arsenic	5.64	0.248	mg/kg	4.27	1.17	105	75-125	19.4	20	
Barium	466	8.55	"	427	30.9	102	75-125	24.3	20	QM-07
Cadmium	4.32	0.0855	"	4.27	0.0346	100	75-125	20.9	20	QM-07
Copper	47.8	8.55	"	42.7	2.63	106	75-125	21.2	20	QM-07
Lead	6.82	0.855	"	4.27	3.01	89.2	75-125	17.8	20	
Nickel	7.04	0.855	"	4.27	2.73	101	75-125	16.6	20	
Selenium	4.40	0.222	"	4.27	0.0635	101	75-125	20.1	20	QM-07
Silver	4.61	0.0855	"	4.27	ND	108	75-125	22.2	20	QM-07
Zinc	54.5	31.6	"	42.7	11.1	102	75-125	17.8	20	

Origins Laboratory

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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1508 - Saturated Paste Metals

Blank (B4K1508-BLK1)

Prepared: 11/15/2024 Analyzed: 11/18/2024

Calcium PPM	ND	10.0	mg/L						
SAR	ND	0.0100	SAR						
Magnesium PPM	ND	10.0	mg/L						
Sodium PPM	ND	10.0	"						

Duplicate (B4K1508-DUP1)

Source: E4K0379-01

Prepared: 11/15/2024 Analyzed: 11/18/2024

Calcium PPM	23.8	10.0	mg/L	23.8			0.126	50
SAR	ND	0.0100	SAR	0.305				200
Magnesium PPM	8.86	10.0	mg/L	8.60			2.98	50
Sodium PPM	6.85	10.0	"	6.82			0.439	50

Batch B4K1509 - Saturated Paste Metals

Blank (B4K1509-BLK1)

Prepared: 11/15/2024 Analyzed: 11/18/2024

SAR	ND	0.0100	SAR					
Calcium PPM	ND	10.0	mg/L					
Magnesium PPM	ND	10.0	"					
Sodium PPM	ND	10.0	"					

Duplicate (B4K1509-DUP1)

Source: E4K0379-04

Prepared: 11/15/2024 Analyzed: 11/18/2024

SAR	ND	0.0100	SAR	0.582				200
Calcium PPM	25.3	10.0	mg/L	25.5			0.905	50
Magnesium PPM	11.9	10.0	"	11.8			0.845	50
Sodium PPM	14.5	10.0	"	14.2			2.44	50

Batch B4K1512 - DTPA Sorbitol Preparation

Blank (B4K1512-BLK1)

Prepared: 11/15/2024 Analyzed: 11/18/2024

Origins Laboratory



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Eagle Environmental Consulting, LLC
 8000 W 44th Ave
 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K1512 - DTPA Sorbitol Preparation										
Blank (B4K1512-BLK1)					Prepared: 11/15/2024 Analyzed: 11/18/2024					
Boron	ND	0.100	mg/L							
Duplicate (B4K1512-DUP1)					Source: E4K0379-01 Prepared: 11/15/2024 Analyzed: 11/18/2024					
Boron	0.0918	0.101	mg/L		0.0877			4.63	50	
Batch B4K1513 - DTPA Sorbitol Preparation										
Blank (B4K1513-BLK1)					Prepared: 11/15/2024 Analyzed: 11/18/2024					
Boron	ND	0.100	mg/L							
Duplicate (B4K1513-DUP1)					Source: E4K0379-05 Prepared: 11/15/2024 Analyzed: 11/18/2024					
Boron	0.0506	0.0993	mg/L		0.0483			4.81	50	

Origins Laboratory

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 Wheat Ridge CO 80033

Alfred Garraffa
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 Project: Noble - State #36-614

Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1517 - Saturated Paste pH/EC

Blank (B4K1517-BLK1)

Prepared: 11/15/2024 Analyzed: 11/16/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B4K1517-DUP1)

Source: E4K0379-01

Prepared: 11/15/2024 Analyzed: 11/16/2024

Specific Conductance (EC) 0.241 0.00500 mmhos/cm 0.240 0.249 25
 pH 8.23 pH Units 8.32 1.09 25

Batch B4K1518 - Saturated Paste pH/EC

Blank (B4K1518-BLK1)

Prepared: 11/15/2024 Analyzed: 11/16/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B4K1518-DUP1)

Source: E4K0379-04

Prepared: 11/15/2024 Analyzed: 11/16/2024

pH 8.30 pH Units 8.23 0.847 25
 Specific Conductance (EC) 0.332 0.00500 mmhos/cm 0.304 8.93 25

Origins Laboratory

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 Wheat Ridge CO 80033

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Total Metals by 7196A - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2718543 - SW846 3060A										
BLANK (1205944837-BLK)					Prepared: 12/13/2024 Analyzed: 12/18/2024					
Hexavalent Chromium	ND	0.320	mg/kg				-			U
LCS (1205944838-BKS)					Prepared: 12/13/2024 Analyzed: 12/18/2024					
Hexavalent Chromium	3.40	0.334	mg/kg	3.34		102	80-120			
DUP (1205944839 D)					Source: 695983001 Prepared: 12/13/2024 Analyzed: 12/18/2024					
Hexavalent Chromium	ND	0.322	mg/kg dry		<0.129		0-50	N/A	50	U
MS (1205944840 S)					Source: 695983001 Prepared: 12/13/2024 Analyzed: 12/18/2024					
Hexavalent Chromium	2.08	0.419	mg/kg dry	4.19	<0.168	48.3	75-125			
DUP (1205944841 D)					Source: 696012001 Prepared: 12/13/2024 Analyzed: 12/18/2024					
Hexavalent Chromium	ND	0.385	mg/kg dry		<0.154		0-50	N/A	50	U
MS (1205944842 S)					Source: 696012001 Prepared: 12/13/2024 Analyzed: 12/18/2024					
Hexavalent Chromium	1.48	0.336	mg/kg dry	3.36	<0.134	42.2	75-125			
ILCS (1205944843-ILCS)					Prepared: 12/13/2024 Analyzed: 12/18/2024					
Hexavalent Chromium	6.76	0.315	mg/kg	6.79		99.5	80-120			

Origins Laboratory

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Eagle Environmental Consulting, LLC
8000 W 44th Ave
Wheat Ridge CO 80033

Alfred Garraffa
Project Number: [none]
Project: Noble - State #36-614

Notes and Definitions

U Result not detected above the detection limit

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

Origins Laboratory



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